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XTAL



PUBLISHED MONTHLY BY THE VE OPERATORS' ASSOCIATION

> AT 106 JARVIS STREET TORONTO, ONTARIO, CANADA



We Now Have Chapters

A recent general meeting decided in favour of the formation of local chapters of the VE Operators' Association. It is an idea which we think is a particularly meritorious one.

For some considerable time now, your executive committee has been casting about for ideas which would further our thoughts on democracy, and which would make the association one that is truly operated in accordance with membership wishes. Every expression or suggestion reaching us has been given thorough and unbiased consideration. From one source came an idea that generated a train of thought which, with some modification, produced the chapter idea.

It is our opinion that individual members, if restricted to expression through the medium of a referendum would, to some extent, possibly be voting without a comprehensive understanding of the question in point. In other words, a more constructive opinion can be formed through participating in a discussion, or from having listened to the airing of the pros and cons of a question.

The difficulty was to discover ways and means of making that necessary discussion available to a number of members. We think the chapter set-up admirably takes care of the matter by making it possible for a great many of our members to give personal attention to association matters in the same manner as they would were they sitting in with the executive committee. We like the idea and think it will further the spirit of democracy which we have been preaching since our inauguration and which we so definitely insist upon.

The idea has been conceived in a general way only. Details of organization and scope will be determined by chapters. The method of association control, and the election of officers and executive committee will, no doubt, be the result of chapter conclusions after giving the matter all due consideration and discussion.

It may be that local chapters will be under the direction of a provincial chapter to which every local chapter would send a representative. Under such a system there would probably be a dominion chapter comprised of representatives from the respective provincial chapters. The dominion chapter would then be the executive body, being as national as the Dominion itself. On the other hand, local chapters might come under the dominion chapter directly.

Whatever the ultimate decision, it will be the choice of members who have had an opportunity to discuss the matter at chapter meetings. Provision will be made for an expression from members who are so situated that attendance at chapter meetings is not possible.

Chapters have already been formed in Montreal and Toronto. There is an opening for a chapter in every centre where we have membership, and it is hoped that no time will be lost in organizing units across the country. Any member or club interested in the formation of a unit should immediately communicate with the office of the association secretary, and the utmost assistance will be extended in the work of organization.

It should not be thought that chapters will in any way be in competition with clubs. Nothing could be farther removed from the truth. Chapters will meet for the express purpose of discussing association business, and matters of national importance. Club activities will not fall within the scope of chapter work. That is to say, the work of clubs will not be parallelled by the functions of a chapter. They are distinctly different. As a matter of fact, clubs will probably find chapters an assistance.

Here is an opportunity for each one of you to take a definite hand in the direction of the affairs of your association. You will get a kick out of it, and you will appreciate your association the more for it. The association will also gain materially.

General Meeting, April 12, 1939

Space does not permit our giving the complete minutes of the general meeting of the Association held at the Electrical Building, University of Toronto, on April 12th, so we outline them briefly.

Two

The meeting was called to order at 8.35 p.m. by the president, who occupied the chair. Those present were VE3GT, ACQ, KV, IW, VD, WK, ACI, VA, PL, JI, AHE, AOY, AID, AWP, ATI, ME, AOS, QF, SG, ZE, ANY, RG, ASM, BU, BD and APS.

The report of the committee appointed at the last general meeting on 3BD's motion, was read. This, you will recall, had to do with clubs and their operation in conjunction with the association. On an unanimous vote the report was accepted and was as follows:

To the Officers and Members of the VE Operators' Association:

Your committee, to whom was referred the matter of club control of the Association, begs to report as follows:

The proposed plan would vest control of the association in clubs across Canada who would decide all matters of policy, and who would govern and direct the association, leaving association officers divest of all authority beyond that of giving effect to club wishes.

Full consideration has been given to the suggestion in all its phases with the result that your committee is of the opinion the proposed plan does not meet the requirements of the situation, and has a total disregard for the rights of association members who are not members of any club.

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Without the advantage of knowing the facts, your committee believes it to be within the realm of possibility that a majority of Canadian amateurs are not members of clubs. At any rate, the speculation is not without merit. It is also possible that a majority of association members are not members of clubs. Assuming that observation to have a degree of accuracy, it follows that the practical effect of inaugurating a clubcontrol system would be to vest control of the association in a group representing what could be a minority of amateurs and in whose ranks there might be few association members.

May, 1939

It is inconceivable that any system of control should be such as to make it possible for an association and its members to be directed and governed by nonmembers. It is, therefore, the majority opinion of your committee that control of the association should rest with members whose expression would be through the medium of an executive system to be determined and elected by the membership, and that association policies should extend to include the interests of every Canadian amateur.

Having regard to the thought herein expressed, and in consideration of the fact that it is within our knowledge that a further proposal may possibly be extended, your committee recommends against club control of the association. Respectfully submitted.

> F. H. B. SAXON, Chairman S. B. TRAINER T. G. E. POWELL R. MACDONALD.

Toronto, Ont., April 12th, 1939.

3ZE then outlined the idea of incorporating local chapters as a perhaps better solution. This is outlined in the editorial. After much discussion, VE3IW moved and AOY seconded that members in any specified locality be given permission to form a local chapter of the VE Operators' Association for the purpose of discussing and passing on recommendations to the association to be subject to referendum of the members across the Dominion. Discussion followed this motion and it was pointed out that some of the Montreal members had already formed a group and had requested they be allowed to call themselves the Montreal Unit, the Montreal VE Ops, or something similar. It was immediately

seen that their suggestions fell in very well with the motion, and after complete discussion of the motion from every angle, a vote was taken and the motion was carried unanimously.

During the general discussion following the regular business, 3BD suggested that it would be to everyone's advantage to make it understood to all members that the Canadian Radiophone Association formed in 1935 had no connection with the XTAL that was then published by the SCM of Ontario for the benefit of Ontario amateurs. He also pointed out that he felt that as the Canadian Radiophone Association had been more or less inactive for the past three years. the officers of that association should be approached and that it would be in the best interests of all that it wind up its affairs and allow the VE Operators' Association to carry on as part of their efforts towards the betterment of VE

radio in general.

The secretary gave a report on the affairs of the association in which he stated the association had 372 members as of April 5th, of which 369 had each paid their annual dues of \$1, the other three being complimentary memberships given three shut-ins. He also quoted the from "B.C. Amachewer": "We suspect their need is more financial rather than literary " referring to the association and XTAL. He pointed out that obviously the person or persons responsible for such statement did not have the faintest idea of what they were talking about, in that the advertising rates of \$15 per page in XTAL were well known, that the revenue derived from advertising could easily be determined by simple arithmetic, and that the cost of printing and mailing 750 copies per issue could be easily obtained, and from that the net loss on XTAL alone could be determined. The \$369 revenue from members' annual dues pays the deficit on publication costs, and the financial position of the association can be easily figured out by anyone interested. He also stated that the financial statement as of Dec. 31, 1938, had been properly audited and accepted, and that the books of the association were open to inspection to auditors at any time should any of the members care to obtain any information for themselves.

The secretary asked 3RF to present a financial statement as of the end of March, 1939. This showed cash on hand \$140.07, outstanding revenue from advertising, \$70.60; accounts payable \$121.67;

leaving a net balance of \$89.00, or an improvement of 29% in net balance over the Dec. 31, 1938, balance. Monies received from members for A.R.R.L. membership 58.50, and monies paid to A.R.R.L. for same, \$60.50, one item being carried over from 1983. Revenue from all members \$148.15, revenue from advertising, \$179.44. Printing costs on XTAL \$398.54. and cost of stationery, postage, prizes, etc., \$56.35. The above figures all are for the three-month period ending March,

MONTREAL CHAPTER

The Montreal Chapter of the VE Operators' Association makes its debut. Would like to see other such groups on the same sheet with us. Congratulations are in order for 2LI, who is now the proud father of a new son. 2AY sticks out a chest, also, due to the fact that he holds signed letters from Commander Brock, R.C.N.V.R., and from Secretary Swanson, U.S. Navy, for efficient copy-ing of the December Navy Day Message. Only one other Canadian holds the same distinction, in the person of VE5AGA. Active in the VE/W contest were 2EE, 2FG, 2NT, 2CO, 2CR, 2DR, 2AA, 2LC, 2HI, and others. VE2 was certainly well represented, as usual. Will you Montreal lads get in touch with me with any news items you might have. Telephone Walnut 5568. -BILL 2FG

TORONTO CHAPTER

Following the general meeting of the Association, on April 12th, in Toronto, the Toronto Chapter was formed. A spirited election took place for the three offices. VE3BD was elected as Chairman, VE3KV as Vice-Chairman and VE3JI as Secretary. The first important announcement the chapter had to make was that with the aid of the Headquarters' gang, they would sponsor an all Canadian Convention, in Toronto, in October, on which you will find an announcement elsewhere in this issue. The Chapter is already "going to town," and to miss this coming convention will be a serious error, we hope for the co-operation and enthusiasm already shown by the gang, which is wonderful; and it looks as if this convention will not take a back seat to any anywhere. Please phone me at HY. 5113 for any information on the Chapter, the Convention, or if you have anything for the Association or XTAL.

-LEN 3JI

Ultra-High Frequency News

Most of the items this month come from VE3KV, to whom we wish to express our appreciation for a very comprehensive report.

On Good Friday there was considerable 5-meter activity between Hamilton and Toronto. VE3OJ, of Hamilton, worked ADO, AVW and KV of Toronto, and heard ADR, ATB and AVQ. AVW was also QSO with DC, of Dundas, for about an hour in the morning. When Easter Sunday dawned bright and clear, three of the Toronto gang set out by car, along with a 5-meter rig, to pay an ultra-high frequency visit to Hamilton. They drove up to the famous portable location on the mountain, but none of the local boys could be seen. After transmitting from this location and others around the city, our heroes finally raised a 5-meter station. Imagine their surprise when this turned out to be VE3AXZ, operating portable out of Toronto. (Probably the Hamilton fellows suffered the same fate as some Toronto boys we could mention: dragged off to church by the XYL.)

Several Toronto clubs have taken up 5-meter activity in a big way. At a recent meeting of the West Side Radio Club a fine-business demonstration of mobile and portable operation was given by AXZ and AIB. The Key Klick Club, of East Toronto, is a live-wire group carrying on much activity on five. The members are making their arrangements for the coming field day.

The "old-timers" of the Toronto 5-meter gang are once more making a drive to eliminate the squealing super-regenerative receivers from the band. How about it, fellows? Let's save those transceivers for occasions when light equipment is essential, and have at least a separate quench oscillator in the regular receiver. If you must use a self-quenching circuit, try a 955 with 22½ volts on the plate. It cuts down the relative hiss level, too.

KV has compiled what is probably an almost complete list of the active 5-meter stations in Toronto, and we offer it here, with apologies to anyone whose call is inadvertently omitted: AAK, ACQ. ADO, ADR, AIB, AID, AIL, AIP, ANY, AOS, ATB, AVQ, AVW, AWP, AXG. AXT, AXZ, AYO, CS, FO. IZ, KV, LI, PL, PT, ZF. Some other calls logged turned out to be harnoics from 10 to 20.

A number of the boys are busy preparing portable equipment for the summer, PL has been playing around with

the three-quarter meter band, but has not got his equipment working right yet. He would like to get in touch with anyone else in Toronto interested in frequencies above 224 mc.

Once again we have to apologize that these notes concern Toronto and vicinity almost exclusively. Maybe it's because it's so much easier to get the dope here by personal contact and the telephone than it is to collect it by letter or ham radio from elsewhere. However, we are beginning to suspect that central Ontario is the most active district for ultra-high frequency activity in Canada. Are there any other cities beside Hamilton and Toronto where there is a gang carrying on regular operations on 5-meters? What say, Montreal? The extremely varied topography of this Dominion of ours presents a challenge to ultra-high frequency experimentation. It has been shown that regular communication on 5 meters is possible across Lake Ontario. How about the Bay of Fundy, or the Strait of Georgia, or considerable distances over the prairies? Summer is coming (we hope), when we can pick our locations. Put up an 8JK beam and feed it with 50 to 100 watts of what it takes, and you'll go places on five.

VE3AYT ex VE1CA

Once again we have the sad duty of recording the passing of a fellow-VE: Charles Victor Wetmore, formerly VE1CA in Liverpool, N.S., and lately assigned the call VE3AYT for operation from 254 Westwood Ave., Toronto, Ont.

1CA was well known in the Maritimes as a result of his activity on 20-metre phone, and about a year and a half ago he came to Toronto to study at the Marconi school for his commercial ticket. While here he became seriously ill, but lately was well on the road to recovery, and, having decided to take up residence in Toronto, had local radio dealers assemble a new 150-watt phone transmitter complete in every detail. The day of 1CA's passing was to have marked the initial test of the new rig on the air, and it was while the modulator section was being connected in by VE3BK, who was assisting 1CA at the time, that the fatal stroke seized our late fellowamateur. Nova Scotia amateur friends had the opportunity of paying their respects as the burial took place at Liverpool.

Members' Activity Reports

XTAL

VE1EB has been a ham since 1902 and is Emergency co-ordinator for Cape Breton Island. The "boss" and the XYL both operate 3XQ, at Belleville. 4AMQ is on nearly every night in Saskatoon for the benefit of the eastern VE's, uses a 6L6G-6L6 and really bangs into Toronto. 1EB is Divisional Superintendent for the Government Telegraph Service at Little Narrows, N.S., and with 100 AC being installed, plans a pair of T-40's in the final in the fall. 3PQ has moved to Apt. 3, 683 Gladstone Ave., Windsor. B.E.R.S. 169 is now a VEOP. 3SA has 75 watts on the air, but with power line noises in Schumacher and Northern Lights, contemplates moving back into the bush. 1CU worked a VE5 the other night, and the first thing the VE5 said was "Hello, VEOP, Hi! The VE1's are getting the low numbers on the 1939 licences, 1MA has No. 1, and 1CU has No. 4. 4QZ's rcvr went west in the middle of the VE/W contest. (He's lucky!) 10Q has been on less than two months and has already been recommended for ORS. F.B. 1NN is on 7 mc now and then and works at CHNS. 1AY has 6L6-809 and is busy on a modulator. We are sorry we got our calls mixed in last XTAL; it was 3ALZ we should have said would like the boys to drop in on him. 3AHZ is located near Thorold and will soon be on 14 mc. fone. 3EG is back in Belleville after taking comm. course in Toronto. 3ADV is still honeymooning in W4land. 3AJS is planning a 14 mc. beam. 3AOP is now mgr. of shoe store in Belleville, very QRL, but not too much so to fit you out when passing through. Thanks to 3AAR for the dope on the above threesome. 3KE's final tube went west and a 46 had to suffice to give him some 26,000 points in the VE/W. 3AIB got Delaware in the VE/W for WAS, and prays for a QSL. 3SH is now 4YJ in Regina. 3GT is now on the road, in Ontario, for Silverwood's, and had a swell time with JO and ABY in Bracebridge. Don't be surprised if GT pops in on you this summer. 3ARB is now 3EZ and sez "its swell to be a member of the VEOPS." And doesn't that make the editors and proof readers feel grand. 3AIB snagged Delaware to complete WAS in the VE/W contest. His score was over 22,000. 4AAN says condx on 75 are rotten lately. 4BO is rebuilding and will be on 80 and 20 again soon. 4QM gets out less worse on 20. 5FW is trying a QRP stunt; has already worked into Ashcroft, B.C., with one-

fifth watt on 75 phone, plate-modulating a peanut tube. 5DV paid a visit to the W7's over the Easter week-end. 5HR has put up a fixed 8JK beam, but reports poor results so far (subject to correction by him). 5FZ had one of his poles come down in a gale. 5ADB is off for a while, having incurred the displeasure of the D. of T. 4WQ, of North Portal, Sask., is now 5DS. 5PI expects to be signing CGFQ shortly. 5AE paid us a visit after a spell in hospital with flu. 5EZ is on spasmodically, lately with DY on key after 40m dx, but during last month has had only a KV, a ZL, a K6, a W1 and two VE3's. 5ACR, of Yellowknife, N.W.T., is expected here momentarily for a visit home. 5HP finds his 'scope in considerable demand since its recent demonstration to V.S.W.C. 3PE is trying 20 for the first time, and has worked 16 countries in one month with 125 watts on phone. Suggestions from BCL's provided the stimulus to try the higher frequencies. He has a new 50-foot steel mast and now has the rotary beam yen.

VE3ACR has had a bit of tough luck. Rebuilt and began operating 160 phone, but fire of undetermined origin demolished a large part of his equipment. It looks like Brantford will soon be having another "ham" on the air. Harry Mitchner is building up his station and should soon have his ticket. Harry will be on 160 phone to start with, and by the looks of his equipment, should get real results. 3HX, with Hank and Alf., are still getting out, as is 3YQ when they really bear down on 75. 3HJ continues to go after and work dx on 20, and considering the fact that Bill is only on the air the odd week end, he has a good sized number of QSO's to his credit.

TORONTO PICNIC

The Toronto Amateur Radio Association wishes to announce that their annual ham picnic is to be held at 2.30 p.m. on July 15 at Hanlan's Point. Hams and SWL's are requested to bring YL's, XYL's, OW's and junior ops. Tickets will be available at the usual popular prices: Adults, 15 cents, two for 25 cents; children, 5 cents. Everybody welcome.

Club News Reports

"The Key Klick Klub, of Toronto, was host to 57 hams and swl's at their annual dinner, held at the New Statler Hotel on the evening of April 24th.

"The Key Klick Klub, of Toronto, was members were then shown through the signal quarters and had the opportunity of witnessing the workings of the No. 1 wireless sets: the "C" sets and the higher

"Following the dinner, the president, 3AID, introduced the speaker, Mr. Howes, and his assistant, Mr. Evans, of the Bell Telephone Co.

"Mr. Howes very ably entertained the group with an interesting lecture illustrated with sound film, covering all phases of telephone communication.

"Of special interest to 'phone hams was his sample of co-axial cable, capable of carrying 480 complete messages over a single wire. Mr. Howes also showed a replica of Bell's first telephone.

"A prize draw followed, during which 20 donations from manufacturers and dealers were distributed.

"A welcome guest was VE1MM, who operates portable VE1DX, and who is visiting Toronto.

"The evening wound up with a general ham-fest and chin-wag. Reports indicated that 'a good time was had by all."

"The Brantford Amateur Radio Club held its election of officers at a special business session on Wednesday, March 29. President James F. Scace, VE3DB; Vice-Pres. Walter Hobbs, VE3ACN, and Jack Davies, Secretary-Treasurer, were unanimously re-elected for another term. Charles R. Grove was appointed as Publicity Manager. An executive committee was formed which included the above-named and Michael Walker. The meeting closed with a tasty lunch and plans for the next meeting."

Radio Club Entertained

The members of the Loyalist City Amateur Radio Club were guests of No. 7 District Signals of the R.C.C.S. at the Armoury March 16. A short business session was conducted in the men's recreation room, with Leslie Codner, vicepresident, occupying the chair in the absence of the president. Major L. R. Whittaker welcomed the club on behalf of the signal unit, and in a few brief remarks outlined the organization of the R.C.C.S. and the work which the unit engages in. Following this, two reels of movie films on signal training were shown. The movies were taken at Camp Borden, and comments were made by Sergeant-Instructor Bowles. The club signal quarters and had the opportunity of witnessing the workings of the No. 1 wireless sets: the "C" sets and the higher powered set. The latter apparatus is operated on schedule three nights a week, when contacts are kept open with other signal units in Canada. Captain J. L. Holman, second in command, commented on the similar interests of radio amateurs with the training of signal personnel and the opportunity that existed in signal units for highly entertaining and instructive work along with national service duty. Refreshments were served and Mr. Codner moved a vote of thanks on behalf of the club to Major Whittaker and his soldiers for a highly entertaining evening.

The Loyalist City Amateur Radio Club annual reports for 1938 indicated a very successful year for the club.

Due to being host to the Maritime District Convention held in Saint John, N.B., last September, it was a big year financially. Hams attending that event may be interested to know that the receipts amounted to \$420, against expenditures of \$406. Those concerned take pride in the fact that actual expenditures came within one dollar of the budgeted figures. Mr. Arthur Ross, Sr., proved a very efficient auditor of the accounts.

At the close of the year, the club membership was 29 and balance in hand \$90.

The President, Vice-President and Secretary were re-elected to office, and the executive for the current year is constituted as follows:—

President. A. S. R. Ruthen, VE1HL; Vice-Pres. W. L. Codner, VE1GP; Secretary, H. C. Fowlie, VE1GQ; Treasurer, W. G. Andrews. VE1LI; Program Director, W. A. Priddle, VE1IC; Social Convener, N. G. Smith, VE1DE; Press Representative, Geo. Wells.

The Victoria S.W.C. is hoping for a spell of fine wx, to paint the outside of the clubhouse. The interior paint job is nearly complete. FW, DQ and DY are a committee swotting over the revision of the club's constitution to meet modern demands. The club holds regular meetings on the second and fourth Saturdays of each month, and visiting hams are always welcome. The QTH is 2500 Foul Bay Road.

A Twenty-Metre Vertical Antenna

The location here demanded the selection of an antenna which would occupy a minimum of space, and at the same time give coverage in all directions on the twenty-metre band. After looking at all the pretty pictures of "Beams," rotary and otherwise, we came to earth and decided that our upper apartment, which had only a small outside porch, would be suitable for a single mast with a vertical antenna fastened thereon. So here goes for a description of same, trusting that some of the brethren who are situated in similar cramped locations will be interested in the details.

May, 1939

The first operation was to prepare the mast, which is the old standby described in the handbooks, consisting of three 2 x 2s bolted together to form a unit about 25 feet high, the base being formed by fanning out the two lower 2 x 2s into an inverted "Y," the "V" part of the mast being supported by cross pieces bolted at intervals. The next step was to securely screw into place 5 large standoff insulators at equal distances down the centre of the mast, the lowest one being placed in the centre of a cross support, about 4 feet above the base. Now we were ready to prepare the antenna itself, and for this we procured three lengths of aluminum tubing 12 feet long. Two of these lengths were 1/2 inch pipe size, and the third was chosen to tightly telescope inside the other two, making a continuous aluminum element cut to suit the particular frequency desired. Our frequency here called for a length of 33 feet 10 inches, which left just over a foot at each end of the centre section, which was telescoped into the two end tubes. This overlap was drilled and two machine screws and nuts put through to ensure strength and good contact at all times in case of oxidization of the aluminum. Next on the program came the mounting of the antenna proper on the standoffs. We found that drilling the tubing and bolting it directly on the insulators weakened the tube, so this idea was discarded, and alternatively bands were cut in the form of clamps from a sheet of spring copper. Now the question of feeding arose, and after perusing an article on vertical antennas by Arthur Lynch, in a recent issue of QST, we decided the simpler the better, and promptly attached a single wire feed, in our case 4 feet 7 inches off centre. After the proper distance from centre was calculated, the feeder may be clamped on with an ordinary ground clamp. We left about ten feet of the tubing extending above the

top of the mast, as the tubing is selfsupporting for this length.

Next we stepped the mast base at the edge of the wall which was to support the lower half, and pushed it up into a vertical position. All that remained then was to make use of nearby objects such as pillars and chimneys, to guy the mast in place.

Using 15 watts input on phone with the above antenna, we have had very good reports from all directions. During the period around the recent dx contest we managed to poke the voice through the QRM to Portugal in the east, Venezuela in the south, and Hawaii in the west, which made us very happy (hi). This antenna proved superior to the horizontals tried on both transmitting and receiving, although local ground waves were much louder, which is not quite an advantage if they happen to be near the frequency of the station worked. —3RF

"PIECE OF WIRE" ANTENNA

The antenna in use here for two years offers a solution to the problem of the ham with a short back yard, and is also convenient for use with portable emergency transmitters. The circuit goes like this: From a tap on the tank coil to a coil of No. 14 wire, 2 inches in diameter and tapped every three turns; the tap goes to the rotor of a 100 to 350 mmfd. receiving type variable condenser; the stator goes to a piece of wire 10 to 80 feet long.

This tuning system has been used with a 10-watt crystal oscillator. Adjustments were made by the following method: Start with the plate tank tap five turns down from the plate end. Now along to the loading coil and adjust the tap so that soup shows in the antenna. Return to the tank coil and move the tap as close to the plate end as possible and still allow the transmitter to follow fast dot keying perfectly. Now adjust the loading coil tap for maximum antenna current (an appropriate bank of pilot lamps will serve for this if you are short an R.F. meter). Tuning the series condenser will show a setting which is best, though output is present at any setting.

The results? This antenna and 10-watt oscillator have worked both coasts on 40 and 80, using a wire 75 feet long and 10 feet off the ground for a total of 900 contacts. The minimum length for 40 meters is 8 feet, and for 80, 25 feet.

—VE3GG.

W. B. E. Certificates

The rules governing the issue of W.B.E. and B.E.R.T.A. certificates recently have been amended to allow nonmembers of the R.S.G.B. to claim these Empire awards. The W.B.E. rules are given below, and those for the B.E.R.T.A. will appear in a future number of XTAL.

Rules Governing the Issue of Worked the British Empire Certificates—W.B.E.

- 1. W.B.E. Certificates will be awarded by the Radio Society of Great Britain to any fully licensed radio amateur who has satisfied the Council of that body that he or she has effected two-way communication, on amateur frequencies, with at least one British Empire amateur station located in each of the five recognized Continental areas as defined by the International Amateur Radio Union (North and South America shall count as one Continental area).
- 2. W.B.E. Certificates will be issued free of charge to members of the Radio Society of Great Britain.
- 3. In the case of non-members of the Radio Society of Great Britain, each certificate will be issued on payment of 2s. 6d., or an equivalent amount in other currency.
- 4. Separate W.B.E. Certificates will be issued for:
 - (a) Two-way Telegraphy working on any band except 28 mc.

(b) Two-way Telephony working on any band except 28 mc.

(c) Two-way Telegraphy working on 28 mc.

(d) Two-way Telephony working on 28 mc.

- 5. In forwarding a claim the applicant shall give a guarantee in writing that his or her licensed power was not exceeded in effecting the contacts upon which the claim is based.
- 6. A minimum readability report of 3 shall be recorded on each card submitted.
- 7. Applications shall be forwarded by registered post to the Secretary-Editor, Radio Society of Great Britain, 53 Victoria Street, London, S.W.1, and each application shall be accompanied by documentary proof in the form of cards or letters showing that two-way working has taken place.
- 8. In the case of claims for telephony awards, the cards or letters shall show clearly that two-way telephony communication took place.
 - 9. Contacts with British mobile sta-

tions (excluding ships) located in the British Empire will be considered as British Empire contacts, providing the exact location of the station at the time of contact is clearly given in the evidence submitted.

10. British Mandated Territories and Protectorates shall be considered, for the purpose of these awards, as forming part of the British Empire.

11. Contacts with Iraq made prior to January 1, 1936, and with Egypt made prior to August 1, 1937, shall be considered as British Empire contacts for the purpose of these awards.

12. Persons to whom W.B.E. Certificates have been issued are permitted to use the letters "W.B.E.(C.H.)" on personal correspondence. The letters (C.H.) signify certificate holder.

13. The Council of the Radio Society of Great Britain may, at their discretion and on receipt of formal application, authorize the Secretary or Honorary Secretary of a recognized overseas amateur radio society to approve claims from nonmembers of the R.S.G.B. In this circumstance the Society in question would be held responsible for forwarding to the R.S.G.B. an official certification, together with the necessary monies.

QSL's for VE1's

The A.R.R.L. VE1 QSL manager, L. J. Fader, VE1FQ, 125 Henry St., Halifax, N.S., has cards on file for the stations listed below. Send a large stamped self-addressed envelope for those dx cards you are waiting for:

AC, AH, AI, AJ, AM, AR, AT, AU, AV, AZ, BB, BD, BG, BH, BI, BK, BN, BQ, BT, BW, BX, BZ, CB, CH, CI, CJ, CK, CN. CO, CQ, CT, CW, CX, CY, DF, DG, DH, DI, DK, DL, DM, DO, DP, DS. DW, DY.

ED, EF, EI. EL, ER, EX, EZ, FF, FG, FJ, FT, FU, FV, FW, GA, GH, GO, GU, GX, HC, HP, HT, HU, IA, IB, IS, IT, IV, IW, JJ.

KA, KF, KK, KL, KM, KN, KQ, KS, KW, KX, LH, LN, LO, MI, MJ, MU, MV, MW, NH, NY, PK, PP, OA, OD, OR.

Station W9XTA is broadcasting on 26.5 mc from 1 to 3 p.m. C.S.T. daily except Sunday, and from 10 to 11 a.m. on Saturdays. Coverage reports from Canada are desired and will be appreciated.

R.S.G.B. National Field Day

May, 1939

The announcement and rules of the annual R.S.G.B. National Field Day is to hand, and the following extracts will be of interest to our members. We believe that the premium for Empire contacts will make participation really worth while.

"In order to encourage contacts with the operators of Empire portables who have in the past supported us in this event, the scoring has been amended to favor such contacts as compared with other portables outside Europe. . . .

"Co-operation is earnestly invited from overseas amateurs. . . .

"Particular care should be taken in ascertaining that the report logged is correct in every detail. Too often in past contests incorrect reports have cost a station points. It is, therefore, necessary for both stations to acknowledge receipt of the report before commencing another call. . . .

"The event will commence at 18.00 G.M.T., June 3, and conclude at 18.00 G.M.T., June 4, 1939. . . .

"All transmissions must be signed off with the band in use. The following numerals must be used to identify the four bands: 1.7 mc, 1; 3.5 mc, 3; 7 mc, 7; 14 mc, 14...

"The event is restricted to the use of c.w. only."

The portions of the scoring table applicable to this continent are as follows: "Contacts between British Isles portable stations and fixed stations outside Europe, 3 points; in the British Empire, 6 points.

"Contacts between British Isles portable stations and portable stations outside Europe, 6 points; in the British Empire, 12 points.

"An exchange of reports (RST) shall be made before points can be claimed; proof of contact may be required."

Here is your opportunity to find out how that portable of yours does get out. Good luck!

The compilation of the activity survey outlined earlier is proceeding. The coverage in Ontario was fairly thorough, and the result, we think, will be surprising to many. Co-operation by members in other provinces was not up to expectation, and the survey for those call districts will not be as comprehensive as desired. All those who did send in lists will be informed of the complete results when available.

A.R.R.L. Field Day, June 17-18

The annual A.R.R.L. Field Day has been announced for June 17-18. As usual, it will provide a pleasant outing and at the same time afford opportunity for the development and practice of emergency technique.

Competition for the Canadian Field Day Trophy will be combined with the A.R.R.L., as specified by the rules. We hope your location turns out to be fortunately chosen, and that the rain does not run down your neck!

Trophy competition rules:

Purpose of Award:

To encourage construction and maintenance of independently powered stations of a design suitable for emergency work.

Eligibility:

Entrants shall be owners of stations entirely independent of power mains, movable, and operated away from the home address under Canadian call for the contest period. The call of the owner shall be used.

Entrants shall give an undertaking to maintain a station eligible for this contest for a period of one year. (This will be changed next year to limit entries to those who complied with this requirement, i.e., those who have maintained a similar station for a year.)

Entrant may enlist the assistance of as many operators as he desires for the field day competition. Scoring:

Scoring shall be on same basis as annual A.R.R.L. field day, with possible bonus of 25% of score, apportioned as follows:

15%—Design (schematic diagrams and photographs to be submitted), antenna system, all-band operation, monitor.

10%-Movable power supply.

Entries shall be received by the secretary of the VE Operators' Association within 21 days of close of contest. A committee of three judges shall be appointed by the president of the association, and their decision shall be final. Prize:

The winner will receive a cup known as the Canadian Field Day Trophy, awarded by the VE Operators' Association, to be his permanent possession.

ZS6Q uses T40 final and 6L6 modulators, rhombic antenna. He reports that winter condx making VE contacts difficult.

DX News

Our genial dx editor is still honey-mooning and 3GT is pinch-hitting, even though reports are meagre this month. During March 4OB snagged YL2BB, OH2OG, UK3CU, U1AD, OH5NS and PA0ON, and heard some nice ones such as CX2AJ, CT1GG, D4GA, ES5D, HB9CX, HC1FG, J5C, J2JJ, J2KN, several K6's, LU's, VK's and ZL'S; OH5NI, 5OD, 2OG, 5NS, 6NS, 1NL; ON4OU, 4DB, 4MX, OZ4H, OZ9QO, several PA's, PK1TM, SM3MT, SP2LM, 2FU, 1AR, 1OK, 3AC, 1QT; U1NE, 1AD, 3BX, 3CU; UK3RC, VR4AM, and VU2FX, and many others.

3KE with his low power made 19,668 points in the DX Contest made up from 43 contacts on 28 mc, 40 on 14 mc, and 17 on 7 mc. and working a total of 37 countries. He heard FBSAA in Madagascar on 28 mc but nd.

During the contest lots of dx was heard on 7 and 28 mc. South America and ZL were the most consistent on 28 mc, with Europe good for a couple of days.

3ES worked four Asians during the fray and should be sure of getting one card for WAC.

3ADV will be on the job for the next issue, so please send all dope to him, c/o Bank of Montreal, Belleville, or to 106 Jarvis Street, Toronto, and we shall QSP.

VE3SK Schedules

We are pleased to announce that the station of the Royal Canadian Corps of Signals (Non-Permanent), 5th Floor, 185 Spadina Ave., Toronto, is now in operation under the call VE3SK on 3,652 kc on Tuesdays and Thursdays from 8 to 11 p.m.

The receiver is an HRO Junior, and the transmitter line-up in 802 triket, 807 buffer and 808 final amplification, running about 150 watts input. An 80-metre half-wave antenna is now being used.

There has been considerable delay in getting on the air because, although the station was built by hams, they were unable to work as hams do, being limited to two hours' work two nights a week.

The many safety features incorporated in the transmitter also took up much time. All meters are behind glass in the front panel, and no adjustments can be made without a relay taking off all plate voltages. All switching of the transmitter must be done from the keying position.

We cordially invite any interested Toronto amateurs to visit the station. Out-of-town hams may obtain information from Major Burgess or Fred Saxon, VE3SG. We shall be glad to contact VE's on the air during the operating schedules given above.

-3ST

Will members who have not sent in the information asked for, please fill in this form when renewing their membership?

APPLICATION FORM

VE Operators' Association

I hereby make application for membership in the VE Operator's Asso-
ciation. One dollar is enclosed for one year's fees and subscription for XTAI
-or-Three dollars is enclosed for one year's fees and subscriptions for XTAL
and QST.

Name	***************************************	Call
Address		
Proficiency Certificate No	Station Lice	ense No
Member of following radio organizations		

Station VE3ALL

May, 1939

VE3ALL, built and operated by Fred Reeve, is far up in the north country on the Abitibi River, approximately one hundred miles south of James Bay.

Fred was born in South Newington, near Bambury, Oxford, England, and came to Canada as a child, in 1907.

He is class "A" power plant maintenance electrician for hydro-electric company, and though most of his time is required at the power plant, he still finds time for experimental work at his amateur station.

3ALL has done some interesting work dealing with antenna. Fraserdale, there in the wide open spaces, is just about the amateur's dream for erecting a station.

Fred's latest successful work is the erection of an antenna 990 feet long, its highest point above the ground being about 290 feet and its lowest point 40 feet; this is due to the fact that the antenna crosses a deep valley. One end of the antenna is supported by a 40-foot telephone pole, and the far end by a 50-foot tripod. The wire used is a special No. 6 aluminum cable, steel re-inforced. The antenna is fed by 30-foot tuned feeders. It is 9 full waves on 40 meters and 18 full waves on 20 meters.

It has been oriented by astronomical observations from Polaris so that one of its main power lobes is directed towards Toronto, this done to carry on schedules with that city. Regular schedules are carried on with VE3VD on 7120 kc. Being O.R.S., this station works schedules on 20, 40 and 80 meters.

The transmitter at VE3ALL is capable of a power output of from 300 to 375 watts.

Fred is married and has one little boy, probably a coming junior operator.

We hope to have more news from this station up there in that great northern district.

SELL - SWAP

ONE SW3 with power supply, 40 and 80 meter coils. What have you? One Bliley BC3 xtal 7258 Kc. Would like one around 7100. — VE3PE, E. C. Skowby, 47 Britannia St., Stratford, Ontario.

VE3AFY selling out. Write for list. Many bargains. 441 McLeod Street, Ottawa, Canada.

DOMINION CONVENTION ROYAL YORK HOTEL TORONTO

OCT. 6th, 7th, 1939

October 6th and 7th will be "red letter days" for amateur radio in Canada. The first dominion-wide convention, the largest ever held, will take place at that time. Another milestone in the progress of Canadian ham radio will be passed. This convention is being held for YOU, to meet your friends of the air and take home with you their lasting friendship and new knowledge of the latest developments of our hobby. Internationally famous speakers, the latest in equipment, entertainment, lots of prizes and memory of a good time that will not be forgotten. This milestone will be lasting and the thought of missing it cannot be valued. REMEMBER THE DATE—if necessary, save two days of your holidays and be at the Royal York Hotel, Toronto, October 6th and 7th. This convention is YOURS. Come and meet your friends and have a good time. Watch for further an nouncements. Send inquiries and reservations to Convention Headquarters, 88 Welland Ave., Toronto.

Hams' Calendar

May 24.—Progressive Radio Club Hamfest, Walper House, Kitchener.
Registration starts 1 p.m.; fee, \$1.25.
Contests, speakers, chicken dinner at 6.30. Everybody welcome. Special program for YL's and XYL's.

June 17-18.—A.R.R.L. Field Day; Canadian Field Day Trophy competition.

July 15.—Toronto Amateur Radio Association Picnic. Hanlan's Point, Toronto.
 Oct. 6-7. — VE Operators' Convention,

Royal York Hotel, Toronto.

NEW MEMBERS

To your list of members as of Feb. 14th, plus new members mentioned in the last two issues of XTAL, please add the following new members: VE1EA, EB, OQ, 2AY, 3AMN, ANY, AWP, PJ, PT, 4AEM, AMQ, IF, UN, 5TJ. and Messrs Geo. Wells, BERS 69; and John Harper. Please also add 3AHZ and Mr. E. Lindley who were omitted from the list in error.

Correspondence

Editor, XTAL:

In response to your plea for more reports from the gang for the "activity" column, I believe a lot of the boys are under the impression that the report they send in to the S.C.M. each month for QST is sufficient. Perhaps it would be wise to make it clear that reports for XTAL must be sent in separately.

Your new "WAVE" certificate should be an attractive incentive to the amateur fraternity. This sets me off on a subject I have long harped on, the QSL!

I cannot understand why so many VE and W hams refuse to QSL. It is the hardest thing in the world to get a QSL from each state for the WAS. The VE's are a tough bunch to get cards from also, especially the VE4's. Why has interest in the ancient art of QSLing waned so noticeably? And interest has decreased, that is certain, as indicated by the recent lists of calls by the QSL managers. For instance, in the April issue of XTAL appeared a list of 240 VE4 calls for whom there were cards. This is approximately 25% of the entire list of licensed VE4 amateurs. Of course, this is only an example. But it shows, nevertheless, that a lot of hams don't give a hang about QSL. It should be impressed on the entire VE gang to always, if possible, QSL. This will assist us all in getting our "WAVE" certificate.

Has anyone brought up the subject of a picture page in XTAL? This would be an interesting feature and let the VE's see what the other chap's rig looks like.

EDMUND C. SKOWBY, VE3PE

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160 & 80 Meter Bands X and	
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Variable Frequency Unit Y	
Cut 80 Meter Band only	4.95
Variable Frequency Unit A	
Cut 80 Meter Band only	6.45

K. BLEVIS LABORATORIES 263 Fairlawn Ave. Toronto, Ont.

Contest Comments

The VE/W 1939 fray is a thing of the past, but circles still appear under the eyes of some participants. We heard from many sources that the gang felt there should be a time limit of say 30 hours operation out of the total of 48 or something. In reply, we would like to state that this apparently was the intention of the contest committee in the first place, for the rules they sent us contained that clause. However, when the rules appeared in QST, it was noted that no mention was made of the time limit, so that, fortunately, we were able to catch the April issue of XTAL in time so that the rules would be alike and so that our members would not be at a disadvantage. From what we can make out the boys seem to favour a time limit for future VE/W contests, and perhaps the committees in the future will agree. We would also like to point out that the committees and clubs that sponsor the contest each year have to go to much trouble regarding it, obtaining prizes and checking logs, so that one and all we should say a 1,000 thanks to this year's contest committee. Never before were so many VE's heard on the air at one time. The battling was hot and furious, and it appears that the winner cannot be forecast until logs are checked. As we have heard them from one source or another, we list below unofficial scores:

COLCD.				
		No.	Sec-	
Station	Score	Worked	tions	
2FG	35,000	777744	1444	
2EE	34,000	******		
3GT	32,100	216	50	
3ES	31,000	205	51	
3KE	25,542	195	44	
3AIB	22,092	lesened.	2	
2NT	22,000	255544		
4AMQ	20,000	151	46	
1CU	11,000	119	31	
4QZ	9,000	85	16	
3ZE	2,300	47	16	
3AJX	3-1-1-1-1-1-1	205	14244	
3APF	**********	195		
3BC		113		
3KC	**********	113		
2HI		92		
2BU	********	44		
1HP		40		
	(1.9.3	13	702	

New QTH—VE4AEI, B. Louis, 112 4th Ave. East, Calgary, Alta.

About the New Regulations

May, 1939

Having just received the official regulations governing operation of amateur transmitters in Canada for the year 1939-40, we thought it would be timely to comment on the changes which the list shows.

Referring to the recommendations made by your association in the letter published in March XTAL, page 12, paragraphs 1 and 2 have both been fulfilledthe band 224-234 mc has been allotted to amateurs with no restrictions, and the 400 mc band has been retained under the same conditions. Every station, whether c.w. or phone, must be equipped with a reliable frequency meter. Regarding phone operations: Some of the equipment and operating rules have been hazy in the minds of many newcomers, and the odd comment on some of them follows in the hope that unintentional infringements may be avoided. This year every phone station (except on 5 metres; must have an overmodulation indicator of the "carrier shift or field strength meter" type, or an oscilloscope. The peak indicators are out this year, as not being satisfactory. The phone rig must be crystal controlled (e.c. is out), and also there should be a tuned circuit between the oscillator and the final amplifier. In the case of a ham wishing to go on 160 metres, he must be active on the air with c.w. for six months, then apply for phone endorsement to his nearest radio office. This is a new reg. The unlimited phone inspection still requires two years of active operation before application can be made. Finally, the following state-ment is of interest: "The retransmission of signals from a station with limited telephone privileges by a station with full telephone privileges, on a restricted band, is prohibited." 3RF

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- 4 3000-volt 220 mmfd Cardwells.
- 4 No. 157 Hammond Chokes (new).
- 4 2A5 to 2000 ohms Hammond Outputs (new).
- 1 Aladdin G201M I.F. Transformer.
- 1 Aladdin G101M I.F. Transformer.
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Ten-watt C.W. xtal xmtr, works 3,000 miles, \$10; 25-cycle power supply, 500 v. 150 ma., 2.5 v. 12 amps, \$5-(all Hammond parts); 204A tube, perfect, \$10; 60-cycle 1/2 kw auto-transformer, 7 taps 40 to 100 p.c. of line, \$1.50; QST file, May 1921 to 1937, \$5:1500-volt variable xmting condensers, 25 to 100 mmfd, 50c up; 40-meter xtals in Billey holders, 7030-7295, perfect, \$2.50 each; 3690 xtal in G.R. holder, \$1; rack assembly for 210 buffer, \$1; same for pair 210's, \$1; Weston 0-600 voltmeter in case, cost \$60, sell \$10; British Army volt-milliameter, 0-24 volts D.C., 0-8 mils, \$5; Weston 0-15 milliameter, A.C., cost \$13.50, sell \$3; Readrite 0-10 and 0-15 A.C. voltmeters, \$1 each; 300-volt D.C. supply, 10 mils, Hammond, 60-cycle, \$1; wheelbarrow load of things and stuff, \$2; filament transformer, 2.5, 5 and 7.5 volts, 25-cycle, 50c each; fil. transformer for 2 866's, 60-cycle, 50c.

All prices f.o.b. Toronto. Trade any of above items for anything of equal value.

M. J. CAVENEY

17 Hopedale Ave., Toronto, GE, 3442